REMARKS

Upon entry of this amendment, claim 4 will be canceled without prejudice or disclaimer of the subject matter recited therein, and claim 1 will be amended. Accordingly, claims 1-3, 5-7 and 9-13 will be pending, with claims 1 and 12 being independent claims.

Claim 1 has been amended to include that the nonionic surface active agent is *N,N*-dimethyldodecylamine oxide, such as disclosed at page 7, line 21 of Applicant's specification. Applicant also noted that this feature is also recited in claim 12.

Reconsideration and allowance of the application are respectfully requested.

Claim Of Foreign Priority

Applicant expresses appreciation for the acknowledgment of the claim of foreign priority as well as receipt of the certified copy of the priority application in parent Application No. 10/005,673.

Response To Art Based Rejections

(a) Claims 1-2, 4, 7, 9 and 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-40782 (JP '782).

In order to advance prosecution of the application, and without expressing any agreement or acquiescence with the rejection of record, independent claim 1 has been amended to be directed to a method for producing a porous sintered body of a calcium phosphate-based ceramic having a porosity of 80 % or more, wherein said method comprises: (1) preparing a slurry comprising a calcium phosphate-based ceramic powder, a water-soluble high molecular compound and a nonionic surface active agent; (2) stirring said slurry vigorously to froth said

slurry; (3) solidifying the frothed slurry into a gel; (4) degreasing a green block having a predetermined shape formed from said gel to remove said water-soluble high molecular compound and said nonionic surface active agent from the gel by heating at 300 to 900°C; and (5) sintering said green block after degreasing, wherein said nonionic surface active agent is *N,N*-dimethyldodecylamine oxide.

Therefore, amongst the features recited in independent claim 1 and claims directly or indirectly dependent upon claim 1, the claims include that the nonionic surface active agent *N,N*-dimethyldodecylamine oxide.

JP'782 does not teach or suggest methods as recited in Applicant's claims that include, amongst the other features recited therein, *N,N*-dimethyldodecylamine oxide as a nonionic surface active agent.

Applicant initially notes that the rejection is without appropriate basis in that the rejection improperly utilizes the disclosure of U.S. Patent No. 5,240,659, does not include this patent in the statement of the rejection. In this regard, the rejection is stated to be based only upon JP '782. Accordingly, if the rejection is maintained, the Examiner is requested to specifically indicate the basis of the rejection.

Similarly, Applicant once again notes that claim 12 is not included in the statement of the rejection, but the rejection does reference claim 12 in the body of the rejection. Therefore, if claim 12 is intended to be included in this rejection, and the rejection is maintained or modified, the Examiner is once again requested to clearly state the basis for the rejection. Applicant has previously made this request; however, the rejection still does not comply with the request. The Examiner is therefore requested to withdraw the rejection if the statement of the basis of the rejection of claim 12 is not clearly stated in the rejection.

Moreover, Applicant notes that the rejection merely references paragraph bridging pages 5 and 6 of JP '782 with reference being made apparently to the fatty acid alkanolamide recited in claim 4, and asserting that it encompasses the claimed oxide recited in claim 12. However, claim 12 recites that the nonionic surface active agent is *N,N*-dimethyldodecylamine oxide, and no is no teaching or suggestion of *N,N*-dimethyldodecylamine oxide in JP '782.

Although JP'782 describes various kinds of nonionic surfactants as the foaming agent in the paragraph bridging pages 5-6 of English translation of JP'782, JP'782 fails to specifically disclose *N,N*-dimethyldodecylamine oxide. In this regard, the Examiner's attention is directed to Applicant's specification at page 4, lines 15-16, and page 7, lines 20-22, wherein it is disclosed that a nonionic surface active agent free of a metal ion and sulfate group, and *N,N*-dimethyldodecylamine oxide (which is free of a metal ion and a sulfate group) is preferable from the viewpoint of frothing properties in the presence of hydroxyapatite. JP '782 fails to disclose N,N-dimethyldodecylamine oxide or any expected advantage as disclosed by Applicant.

The rejection apparently realizes the deficiencies of the disclosure of JP '782, but seeks to overcome the deficiencies of JP '782 by improperly relying upon US 2007/0072009, paragraph 54. In particular, the Response to Arguments portion of the Final Office Action, beginning at the penultimate line of page 6, asserts:

> At page 8 of Applicant's response, it is argued that '782 does not disclose the claimed nonionic surfactant. However, fatty acid alkanolamide genus of '782disclosed in page 5-6, is deemed to encompass the claimed species oxide in view that the art already specifies that a type of fatty acid alkanolamide used in forming porous sintered bodies is N,N-dimethyldodecylamine oxide (See US 2007/0072009, paragraph 54). Hence, while '782 only discloses the genus fatty acid alkanolamide it is well understood in the art that it encompasses N,N-dimethyldodecylamine oxide species.

Initially, Applicant notes that the use of a document outside of the rejection is improper to support the rejection. The rejection must adequately set forth the basis of the rejection

utilizing documentary evidence in support of the rejection. Therefore, if the rejection intends to support the basis of the rejection using US 2007/0072009, the rejection should be modified to indicate how US 2007/0072009 is being utilized therein.

Moreover, Applicant notes that US 2007/0072009, which is commonly assigned with the present application and includes Toshi Matsumoto as an overlapping inventor, indicates on its Cover Page that it is a national stage Application of PCT Application No.PCT/JP04/15941, filed October 27, 2004, which claims priority of JP 2003-366404, filed October 27, 2003. In contrast, the present application has an effective filing date based upon its parent Application No. 10/005,673 of December 7, 2001, and claims priority of JP 2000-373600, filed December 7, 2000. Accordingly, US 2007/0072009 does not constitute prior art, and cannot be utilized by the Examiner to support knowledge of the prior art at the time of Applicant's invention.

Still further, the rejection cannot merely point to certain materials, such as *N,N*-dimethyldodecylamine oxide being a nonionic surface active agent. However, the rejection must establish that one having ordinary skill in the art would have included *N,N*-dimethyldodecylamine oxide in JP '782 and must address the advantageous results disclosed by Applicant.

Accordingly, Applicant's claims are not obvious over JP '782, whereby this ground of rejection should be withdrawn.

Therefore, for at least the reasons set forth above, the rejection should be withdrawn.

(b) Claims 1, 3, 4, 7, 9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imura(GB 2348872) (hereinafter "GB '872"), or alternatively Imura (US 6,340,648) (hereinafter "US'648").

Applicant initially notes that the rejection is without appropriate basis in that the rejection improperly utilizes the disclosure of U.S. Patent No. 5,240,659, does not include this patent in the statement of the rejection. In this regard, the rejection is stated to be based only upon either of GB '872 or US'648. Accordingly, if the rejection is maintained, the Examiner is requested to specifically indicate the basis of the rejection.

As noted above, in order to advance prosecution of the application, and without expressing any agreement or acquiescence with the rejection of record, independent claim 1 has been amended to be directed to a method for producing a porous sintered body of a calcium phosphate-based ceramic having a porosity of 80 % or more, wherein said method comprises: (1) preparing a slurry comprising a calcium phosphate-based ceramic powder, a water-soluble high molecular compound and a nonionic surface active agent; (2) stirring said slurry vigorously to froth said slurry; (3) solidifying the frothed slurry into a gel; (4) degreasing a green block having a predetermined shape formed from said gel to remove said water-soluble high molecular compound and said nonionic surface active agent from the gel by heating at 300 to 900°C; and (5) sintering said green block after degreasing, wherein said nonionic surface active agent is *N,N*-dimethyldodecylamine oxide.

Therefore, amongst the features recited in independent claim 1 and claims directly or indirectly dependent upon claim 1, the claims include that the nonionic surface active agent is *N,N*-dimethyldodecylamine oxide.

Neither of GB '872 or US '648 teaches or suggests methods as recited in Applicant's claims that include, amongst the other features recited therein, *N,N*-dimethyldodecylamine oxide as a nonionic surface active agent.

Applicant notes that the rejection points to GB '872, claim 7, for using species of the claimed surface active agents. However, a review of claim 7 of GB '872 reveals that the claim 7 recites "A method for producing a calcium phosphate porous sintered body according to claim 6 wherein the organic material hardenable by crosslinking polymerization is a linear, branch or block polymer containing amino group of polyacrylamide, polyethylene imine or polypropylene imine, and the cross-linking agent is an epoxidized compound having two or more epoxy groups of sorbitol polyglycydyl ether, polyglycerol polyglycydyl ether, pentaerythritol polyglycydyl ether, diglycerol polyglycydyl ether, glycerol polyglycydyl ether or polymethylolpropane polyglycydyl ether." The rejection does not state how the subject matter of claim 7 of GB '872 in any way relates to the methods recited by Applicant which include preparing a slurry comprising a calcium phosphate-based ceramic powder, a water-soluble high molecular compound and a nonionic surface active agent.

If the rejection is maintained, the Examiner is reminded that the rejection must establish that one having ordinary skill in the art would have included *N,N*-dimethyldodecylamine oxide in either of GB '872 or US '648, and must address the advantageous results disclosed by Applicant.

Accordingly, Applicant's claims are not obvious over GB '872 or US '648, whereby these grounds of rejection should be withdrawn.

Therefore, for at least the reasons set forth above, the rejections should be withdrawn.

(c) Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB '872 or US '648 in view of JP 3-131580 (JP'580); or JP 63-40782 (JP'782) in view of JP'580

The rejection notes that GB '872 and US '648 to Imura and JP'782 are silent with respect to disclosing the claimed % weight of the foaming agent (surface active agent), thickening agent

(high molecular compound), and ceramic. However, the rejection contends that JP'580 discloses the claimed % weight.

In response, Applicant submits that, whether or not it would have been within the skill of one having ordinary skill in the art to combine the documents in the manner set forth in the Office Action, the presently claimed subject matter would not be arrived at at least for the reasons previously noted above. In this regard, claims 5 and 6 are patentable at least for the reasons set forth with respect to independent claim 1. Moreover, these claims further patentably recite the subject matter included in these claims.

The rejection again asserts that claim 5 does not specify if the parts by weight is relative to the weight of the slurry or the supplied ceramic. However, Applicant notes that claim 5 recites, "The method for producing a porous sintered body according to claim 1, wherein 1 to 10 part by weight of said water-soluble high molecular compound and 1 to 10 part by weight of said nonionic surface active agent are used with 100 parts by weight of said calcium phosphate-based ceramic powder." Accordingly, it is clear that the parts by weight in claim 5 is relative to the weight of the supplied ceramic.

Also, claim 6 calls for "The method for producing a porous sintered body according to claim 1, wherein a weight ratio of the total of said calcium phosphate-based ceramic powder, said water-soluble high molecular compound and said nonionic surface active agent is 20 to 50 weight % based on 100 weight % of said slurry." Accordingly, it is clear that the weight % in claim 6 is relative to the weight of the weight of the slurry.

Accordingly, the rejection of claims 5 and 6 should be withdrawn.

(d) Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imura GB '872 or US '648 in view of WO 98/15505 (WO'505); or JP'782 in view of WO '505 (WO'505).

The rejection asserts that GB '872 and US '648 and JP '782 are silent disclosing the claimed step of passing gas through the slurry of ceramics, foaming agent and thickener to froth the desired froth. However, the rejection contends that WO '505 discloses a method of stirring the claimed slurry and introducing air to provide froth and subsequently form artificial body parts, bone.

In response, Applicant submits that, whether or not it would have been within the skill of one having ordinary skill in the art to combine the documents in the manner set forth in the Office Action, the presently claimed subject matter would not be arrived at at least for the reasons previously noted above. In this regard, claim 10 is patentable at least for the reasons set forth with respect to independent claim 1. Moreover, this claim further patentably recites the subject matter included in these claims.

Accordingly, this rejection should be withdrawn.

CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

Applicant therefore respectfully requests that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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